

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

What is claimed is:

1. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting an electrode into the esophagus of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve.
2. (Original) The method of Claim 1,

wherein said step of inserting an electrode into the esophagus of said patient comprises the step of inserting a first electrode into the esophagus of said patient;

wherein said method comprises the further step of inserting a second electrode into the esophagus of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

3. (Original) The method of Claim 2, wherein said step of inserting a second electrode into the esophagus of said patient in spaced apart relation to said first electrode comprises the step of inserting a second electrode into the esophagus of said patient approximately one centimeter from said first electrode.

4. (Original) The method of Claim 2, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

5. (Original) The method of Claim 2, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

6. (Original) The method of Claim 1, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

7. (Original) The method of Claim 6, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

8. (Original) The method of Claim 1, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

9. (Original) The method of Claim 8, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

10. (Original) The method of Claim 9, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

11. (Original) The method of Claim 1, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

12. (Original) The method of Claim 1, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

13. (Original) The method of Claim 12, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

14. (Original) The method of Claim 1, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

15. (Original) The method of Claim 1, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

Claims 16-30. (Cancelled).

31. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting an electrode into the jugular vein of said patient; and
actuating said electrode to create an electrical field effective to stimulate said vagus nerve.

32. (Original) The method of Claim 31,
wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting a first electrode into the jugular vein of said patient;
wherein said method comprises the further step of inserting a second electrode into the jugular vein of said patient in spaced apart relation to said first electrode; and
wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

33. (Original) The method of Claim 32, wherein said step of inserting a second electrode into the jugular of said patient in spaced apart relation to said first electrode comprises the step of inserting a second electrode into the jugular vein of said patient approximately one centimeter from said first electrode.

34. (Original) The method of Claim 32, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

35. (Original) The method of Claim 32, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

36. (Original) The method of Claim 31, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

37. (Original) The method of Claim 36, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

38. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

39. (Original) The method of Claim 38, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

40. (Original) The method of Claim 39, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

41. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

42. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

43. (Original) The method of Claim 42, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

44. (Original) The method of Claim 31, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

45. (Original) The method of Claim 31, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

46. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

positioning an electrode on the neck of said patient; and

actuating said electrode to create an electrical field effective to stimulate said vagus nerve.

47. (Original) The method of Claim 46,

wherein said step of positioning an electrode on the neck of said patient comprises the step of positioning a first electrode on the neck of said patient;

wherein said method comprises the further step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said first and second electrodes to create an electrical field.

48. (Original) The method of Claim 47, wherein said step of positioning a second electrode on the neck of said patient in spaced apart relation to said first electrode comprises the step of positioning a second electrode on the neck of said patient approximately one centimeter from said first electrode.

49. (Original) The method of Claim 47, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

50. (Original) The method of Claim 47, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

51. (Original) The method of Claim 46, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

52. (Original) The method of Claim 51, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

53. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz.

54. (Original) The method of Claim 53, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

55. (Original) The method of Claim 54, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

56. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of actuating said electrode to generate electrical impulses having a duration of 0.4 msec.

57. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about one to about forty volts.

58. (Original) The method of Claim 57, wherein said step of actuating said electrode to create an electrical field comprises the step of transmitting to said electrode an electrical impulse having an amplitude of from about two to about six volts.

59. (Original) The method of Claim 46, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

60. (Original) The method of Claim 46, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

Claims 61-74. (Cancelled).

75. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting a first electrode into the esophagus of said patient;

inserting a second electrode into a jugular vein of said patient; and

actuating at least one of said electrodes to create an electrical field which stimulates said vagus nerve.

76. (Original) The method of Claim 75, wherein said step of inserting a second electrode into a jugular vein of said patient comprises the step of inserting a second electrode into a jugular vein of said patient to a location approximately one centimeter from said first electrode in said esophagus of said patient.

77. (Original) The method of Claim 75, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

78. (Original) The method of Claim 75, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

79. (Original) The method of Claim 75, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

80. (Original) The method of Claim 79, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

81. (Original) The method of Claim 75, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of applying an impulse to at least one of said electrodes at a frequency of between about one Hertz and about five hundred Hertz.

82. (Original) The method of Claim 81, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

83. (Original) The method of Claim 82, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

84. (Original) The method of Claim 75, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating at least one of said electrodes to generate electrical impulses having a duration of 0.4 msec.

85. (Original) The method of Claim 75, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about one to about forty volts.

86. (Original) The method of Claim 85, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about two to about six volts.

87. (Original) The method of Claim 75, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

88. (Original) The method of Claim 75, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

89. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting a first electrode into the esophagus of said patient;

placing a second electrode on the neck of said patient; and

actuating at least one of said electrodes to create an electrical field which stimulates said vagus nerve.

90. (Original) The method of Claim 89, wherein said step of positioning a second electrode on the neck of said patient comprises the step of positioning a second electrode on the neck of said patient at a location approximately one centimeter from said first electrode in said esophagus of said patient.

91. (Original) The method of Claim 89, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

92. (Original) The method of Claim 89, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

93. (Original) The method of Claim 89, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

94. (Original) The method of Claim 93, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

95. (Original) The method of Claim 89, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of applying an impulse to at least one of said electrodes at a frequency of between about one Hertz and about five hundred Hertz.

96. (Original) The method of Claim 95, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

97. (Original) The method of Claim 96, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

98. (Original) The method of Claim 89, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating at least one of said electrodes to generate electrical impulses having a duration of 0.4 msec.

99. (Original) The method of Claim 89, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about one to about forty volts.

100. (Original) The method of Claim 99, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about two to about six volts.

101. (Original) The method of Claim 89, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

102. (Original) The method of Claim 89, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

Claims 103-130 (Cancelled).

131. (Original) A method for stimulating a vagus nerve of a patient, comprising the steps of:

inserting a first electrode into a jugular vein of said patient;

placing a second electrode on the neck of said patient; and

actuating at least one of said electrodes to create an electrical field which stimulates said vagus nerve.

132. (Original) The method of Claim 131, wherein said step of positioning a second electrode on the neck of said patient comprises the step of positioning a second electrode on the neck of said patient at a location approximately one centimeter from said first electrode in said jugular vein of said patient.

133. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating both of said first and second electrodes to create an electrical field.

134. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating one or both of said electrodes in one of a unipolar or a bipolar mode.

135. (Original) The method of Claim 131, wherein said vagus nerve is stimulated for a period of between about five and about ninety seconds.

136. (Original) The method of Claim 135, wherein said vagus nerve is stimulated for a period of between about five and about fifteen seconds.

137. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of applying an impulse to at least one of said electrodes at a frequency of between about one Hertz and about five hundred Hertz.

138. (Original) The method of Claim 137, wherein said step of applying an impulse at a frequency of between about one Hertz and about five hundred Hertz comprises the step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz.

139. (Original) The method of Claim 138, wherein said step of applying an impulse at a frequency of between about twenty Hertz and about eighty Hertz comprises the step of applying an impulse at a frequency of about forty Hertz.

140. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of actuating at least one of said electrodes to generate electrical impulses having a duration of 0.4 msec.

141. (Original) The method of Claim 131, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about one to about forty volts.

142. (Original) The method of Claim 141, wherein said step of actuating at least one of said electrodes to create an electrical field comprises the step of transmitting to at least one of said electrodes an electrical impulse having an amplitude of from about two to about six volts.

143. (Original) The method of Claim 131, wherein said vagus nerve is stimulated during a surgical procedure selected from the group consisting of: minimally invasive direct coronary artery bypass graft surgery, off-pump coronary artery bypass graft surgery, coronary artery bypass surgery performed on cardiopulmonary bypass, partially or totally endoscopic coronary artery bypass graft surgery, percutaneous or surgical transmyocardial laser revascularization procedure, or a surgical procedure performed upon a heart, heart valves, myocardium, coronary vascular structure, peripheral vascular structure, a electrophysiological procedure, a neurosurgical procedure, or a percutaneous transcatheter coronary procedure.

144. (Original) The method of Claim 131, wherein said step of actuating said electrode to create an electrical field effective to stimulate said vagus nerve comprises the step of creating an electrical field effective to stimulate said vagus nerve to achieve asystole.

145. (New) The method of Claim 1,
wherein said step of inserting an electrode into the esophagus of said patient comprises the step of inserting more than one electrode into the esophagus of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

146. (New) The method of Claim 145, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

147. (New) The method of Claim 31,

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting more than one electrode into the jugular vein of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

148. (New) The method of Claim 147, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

149. (New) The method of Claim 46,

wherein said step of inserting an electrode into the neck of said patient comprises the step of inserting more than one electrode into the neck of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

150. (New) The method of Claim 149, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

151. (New) The method of Claim 75,
wherein said step of inserting an electrode into the esophagus of said patient comprises the step of inserting more than one electrode into the esophagus of said patient;

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting more than one electrode into the jugular vein of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

152. (New) The method of Claim 151, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

153. (New) The method of Claim 89,

wherein said step of inserting an electrode into the esophagus of said patient comprises the step of inserting more than one electrode into the esophagus of said patient;

wherein said step of inserting an electrode into the neck of said patient comprises the step of inserting more than one electrode into the neck of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

154. (New) The method of Claim 153, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.

155. (New) The method of Claim 131,

wherein said step of inserting an electrode into the jugular vein of said patient comprises the step of inserting more than one electrode into the jugular vein of said patient;

wherein said step of inserting an electrode into the neck of said patient comprises the step of inserting more than one electrode into the neck of said patient;

further wherein each electrode of the said more than one electrode is arranged in a spaced apart relation relative to each other electrode; and

wherein said step of actuating said electrode to create an electrical field comprises the step of actuating at least one of said more than one electrode to create an electrical field.

156. (New) The method of Claim 155, wherein each electrode of the more than one electrode is spaced approximately one centimeter from each other electrode.